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(54) Title: ALUMINIUM OXIDE POWDER PRODUCED BY FLAME HYDROLYSIS AND HAVING A LARGE SURFACE AREA

(57) Abstract: Aluminium oxide powder produced by flame hydrolysis and consisting of aggregates of primary particles, having a BET surface area of from 100 to 250 m²/g, a dibutyl phthalate absorption of from 50 to 450 g/100 g of aluminium oxide powder, which powder shows only crystalline primary particles in high-resolution TEM pictures. It is prepared by vaporising aluminium chloride, transferring the vapour by means of a carrier gas to a mixing chamber and, separately therefrom, supplying hydrogen, air (primary air), which may optionally be enriched with oxygen and/or may optionally be pre-heated, to the mixing chamber, then igniting the mixture of aluminium chloride vapour, hydrogen, air in a burner and burning the flame into a reaction chamber that is separated from the surrounding air, subsequently separating the solid material from the gaseous substances and then treating the solid material with steam and optionally with air, the discharge rate of the reaction mixture from the mixing chamber into the reaction chamber being at least 10 m/s, and the lambda value being from 1 to 10 and the gamma value being from 1 to 15. It can be used as an ink-absorbing substance in ink-jet media.



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